

Claims

1. In a multimedia computer speaker system having a speaker for transducing an audio signal from an audio output circuit of a multimedia computer, the improvement comprising:

a pair of amplifiers with differential connections for receiving the audio signal and with differential output connections to the speaker to provide it with differential amplification.

2. The system of claim 1 in which the pair of amplifiers includes power connections that are connectable to a power source having a power source ground and the audio signal is provided with reference to an audio system ground that is electrically non-identical to the power source ground.

3. The system of claim 2 in which the amplifier power connections are connectable to a power source included in the multimedia computer.

4. The system of claim 1 in which the audio signal is provided with reference to an audio system ground and the pair of amplifiers includes first and second amplifiers that each have inverting and non-inverting inputs, the first amplifier receiving the audio signal at the non-inverting input, the inverting input of the second amplifier being coupled to the audio system ground, and the first and second amplifiers being connected together so that both amplifiers will only amplify the difference signal between the audio signal and the audio system ground.

5. The system of claim 4 in which the pair of amplifiers includes power connections that are connectable to a power source that is included in the multimedia computer.

6. The system of claim 1 in which the pair of amplifiers includes power connections that are connectable to a power source that is included in the multimedia computer.

7. The system of claim 6 in which the power connections conform to a power-available port of the multimedia computer.

8. The system of claim 6 in which the power connections conform to a universal serial bus port of the multimedia computer.

9. The system of claim 6 in which the power connections conform to a IEEE 1394 port of the multimedia computer.

10. The system of claim 1 in which the audio signal corresponds to one of multiple audio signal channels, the system further comprising for each audio signal channel a pair of amplifiers with differential connections for receiving the audio signal and with differential output connections to the speaker to provide it with differential amplification.

11. In a multimedia computer speaker system having a speaker for transducing an audio signal from an audio output circuit of a multimedia computer, the improvement comprising:

a pair of amplifiers with differential connections for receiving the audio signal and with differential output connections to the speaker to provide it with differential amplification; and

a DC power coupling for receiving DC power from a power source that is included in the multimedia computer.

12. The system of claim 11 in which the power source has a power source ground and the audio signal is provided with reference to an audio system ground that is electrically different from the power source ground.

13. The system of claim 11 in which the audio signal is provided with reference to an audio system ground and the pair of amplifiers includes first and second amplifiers that each have inverting and non-inverting inputs, the first amplifier receiving the audio signal at the non-inverting input, the inverting input of the second amplifier being coupled to the audio system ground, and the first

amplifier and second amplifier being connected together so that both amplifiers will only amplify the difference signal between the audio signal and the audio system ground.

14. The system of claim 11 in which the audio signal corresponds to one of multiple audio signal channels, the system further comprising for each audio signal channel a pair of amplifiers with differential connections for receiving the audio signal and with differential output connections to the speaker to provide it with differential amplification.

15. In a multimedia computer speaker system having a speaker for transducing an audio signal from an audio output circuit of a multimedia computer, a method of driving the speaker, comprising:

differentially applying the audio signal to a pair of amplifiers that each have an amplifier output; and

differentially coupling the amplifier outputs to the speaker.

16. The method of claim 15 in which the pair of amplifiers include power connections that are connectable to a power source having a power source ground and the audio signal is provided with reference to an audio system ground that is electrically different from the power source ground.

17. The method of claim 16 further comprising connecting the amplifier power connections to a power source included in the multimedia computer.

18. The method of claim 15 in which the pair of amplifiers includes first and second amplifiers that each have inverting and non-inverting inputs, the method further comprising providing the audio signal with reference to an audio system ground, applying the audio signal to the non-inverting input of the first amplifier, coupling the inverting input of the second amplifier to the audio system ground, and coupling the first amplifier and second amplifier being connected

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together so that both amplifiers will only amplify the difference signal between the audio signal and the audio system ground..

19. The method of claim 18 in which the pair of amplifiers include power connections that are connectable to a power source, the method further comprising coupling power connections to a power source that is included in the multimedia computer.

20. The method of claim 15 in which the pair of amplifiers include power connections that are connectable to a power source, the method further comprising coupling power connections to a power source that is included in the multimedia computer.

21. In an amplified multimedia computer speaker system having an amplified speaker for transducing an audio signal from an audio output circuit of a multimedia computer, the improvement comprising:

a power connection that conforms to a universal serial bus port of the multimedia computer for powering the multimedia computer speaker system.

22. In an amplified multimedia computer speaker system having an amplified speaker for transducing an audio signal from an audio output circuit of a multimedia computer, the improvement comprising:

a power connection that conforms to a IEEE 1394 port of the multimedia computer for powering the multimedia computer speaker system.

23. A differential stereo audio amplification system connectable to an audio speaker, the improvement comprising:

a pair of amplifiers with differential connections for receiving the audio signal and with differential output connections to the speaker to provide it with differential amplification.

24. The system of claim 23 in which the pair of amplifiers includes power connections that are connectable to a power source having a power source

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ground and the audio signal is provided with reference to an audio system ground that is electrically non-identical to the power source ground.

25. The system of claim 23 in which the audio signal is provided with reference to an audio system ground and the pair of amplifiers includes first and second amplifiers that each have inverting and non-inverting inputs, the first amplifier receiving the audio signal at the non-inverting input, the inverting input of the second amplifier being coupled to the audio system ground, and the first and second amplifier being connected together so that both amplifiers will only amplify the difference signal between the audio signal and the audio system ground.

26. The system of claim 23 in which the audio signal corresponds to one of two audio signal channels, the system further comprising for each audio signal channel a pair of amplifiers with differential connections for receiving the audio signal and with differential output connections to provide differential amplification.

27. The system of claim 26 comprising a multimedia computer audio speaker for each of the two audio channels.

28. The system of claim 26 comprising two audio speakers for the two audio channels, the two audio speakers being coupled together to form a headphone.

29. The system of claim 26 further comprising couplings for connecting the two audio channels to either of two pair of audio speakers, one pair of audio speakers being included in a headphone.

30. The system of claim 29 further comprising a switch mechanism to switch between the couplings for the two pairs of audio speakers. 26. The system of claim 23 in which the audio signal corresponds to one of two audio signal channels, the system further comprising for each audio signal channel an

the audio speakers each including a terminal coupled to a junction between a pair of resistors, each of which is connected to one of the amplifiers for one of the audio signal channels.